

WHITEPAPER

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Liquidity Risk: Some Practical Challenges Remain, but this is the Time to Automate & Integrate.

Highlights

- » Banks now have greater clarity over the regulatory compliance environment than at any time since before the financial crisis. The UK regulator's Pillar 2 recommendations on liquidity help to complete the picture. Nevertheless some implementation challenges remain.
- » Many banks – including some of the largest European banks – have been understandably reluctant to invest in strategic technology platforms for managing risk, since, for nearly a decade, they have been focused on the latest regulatory project.
- » The current environment presents banks with an excellent opportunity to get off the compliance treadmill and move forward with a strategic vision that looks beyond the next round of reports.
- » In pursuit of this objective and to reduce overhead costs, we believe that banks must integrate the management of liquidity and interest rate risks under ALM, and move toward true risk-adjusted pricing by implementing the technology platforms that support such solutions.

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Introduction

In recent years, increased focus has been placed on regulatory compliance regimes based on standardized metrics. This focus has produced an unintended consequence, in that many bank managers cannot afford adequate time and resources to develop and refine their own internal approaches to measuring and monitoring risk, and those who can afford it, may feel less motivated to do so. This holds true in all areas of risk management. For example, the UK regulator's proposals for Pillar 2 liquidity¹ appear to pile on even more regulatory pressure, beyond the liquidity coverage ratio (LCR) and net stable funding ratio (NSFR), which are both important elements in the Basel Accords. It is our view that the proposals for cash flow mismatch risk (CFMR), signal an era of relative calm in the sea of regulations. Banks should exploit this hiatus to implement integrated solutions covering regulatory compliance, internal risk management, and risk-adjusted pricing.

The Basel III Metrics

During the financial crisis, inadequate liquidity proved to be the undoing of many financial institutions, both in terms of the drying up of interbank lending markets and bank runs. Supervisory authorities responded by tightening regulatory requirements governing liquidity risk. The liquidity coverage ratio (LCR) is the key metric in Basel III. Its aim is to secure institutions' short-term financial solvency in the 30 calendar days prescribed by the regulator stress scenario. Another significant metric for strengthening banks' medium- to long-term liquidity profiles is the net stable funding ratio (NSFR), which requires banks to ensure a sustainable maturity structure of assets and liabilities. Banks must maintain stable sources of funding, such as traditional deposits, in relation to the composition of their assets and off-balance sheet activities, to survive a one-year period of extended stress. By limiting maturity mismatches, NSFR reduces rollover risk and promotes funding stability.

The LCR is being implemented gradually, starting in 2015, when the ratio was set at 60% or higher. The implementation must be finished in 2019, with a ratio higher than 100% - though in the UK, the regulator already expects banks to meet the 100% ratio. Banks have until 2018 to meet the NSFR standard. Over time the NSFR will be reviewed as proposals are developed and industry standards implemented. LCR and NSFR are stipulated and binding (Pillar 1) metrics.

Because they have faced considerable challenges in the implementation of these liquidity ratios, until now, institutions have focused on appropriately calculating and reporting LCR and NSFR, typically to the detriment of their own internal risk management profiles, which have had to take a back seat.

In a parallel trend, internal risk management teams have adopted, or learned to speak, the language of the regulatory supervisor, even if they are not directly involved in preparing reports. Credit institutions around the world are in near-constant communication with their regulators on liquidity conditions, capital levels, and credit exposures. The "ability to speak to the regulator" is increasingly seen as a requirement for senior risk management roles, and this requirement has cascaded down the entire function. Supervisory regulators want access to more specific, granular, and timely information so they can identify and address real and potential issues.

The pressure to respond, often at short notice, to requests from supervisors has led senior management to demand that internal reports must be "regulator ready". Where new internal risk measures or stress tests are developed, these also need to be comparable to, and often couched in the same terms as, regulatory metrics.

1. For additional information, refer to Prudential Regulation Authority publication '[Pillar 2 liquidity – CP13/17](#)'

Internal Liquidity Risk Management

Internal risk management is not necessarily significantly different from what is demanded by regulators. However, the overall approach is based on an analysis of the maturity transformation that occurs in the institution's own banking book rather than the "one size fits all" approach of stipulated standard ratios. Therefore, there is greater latitude to identify and address nuances within particular institutions. Essentially, liquidity is the ability of a financial organization to meet its commitments when they fall due. It is a process that must be managed on a daily, or even real-time basis, requiring bankers to monitor and project cash flows to ensure that adequate liquidity is maintained. Liquidity might be required to fund customer transfers and settlements or to meet other demands generated by the bank's business with its clients. Almost every financial transaction or financial commitment has implications for a bank's liquidity, unless of course a bank is very cash-rich. Liquidity risk management helps make certain of a bank's ability to meet its cash flow obligations in a variety of scenarios. An important element of asset & liability management (ALM) is thus to prevent a liquidity mismatch of assets and liabilities (an imbalance in the maturity term creating a liquidity gap).

In the lead-up to the financial crisis, many banks that had grown used to funds being readily accessible did not have an adequate framework that satisfactorily accounted for the liquidity risks required by their individual products and business lines. Incentives at the business level were out of alignment with the overall risk tolerance of these banks; failures at the most exposed institutions affected even those that were following best practice as the liquidity crisis became systemic. Hence the imposition by the Basel committee of binding Pillar 1 metrics such as LCR and NSFR.

Over the past 10 years the focus has thus moved away from risk-based balance sheet management to regulatory compliance with stipulated values, which is why traditional internal risk assessment best practices have taken a back seat, even if they have not been entirely neglected. As banks discovered with credit risk management a few years ago, when regulatory capital edged out economic capital, maintaining two sets of definitions is challenging and costly. Being a mandatory requirement, regulatory measures will always win this battle, regardless of whether or not it forms the optimal basis for internal risk management. The only way to circumvent this dilemma is to implement an automated technical infrastructure capable of combining similar methodologies.

PRA110: Gold-plating LCR?

On the face of it, the UK regulator's recent consultation paper "CP13/17 Pillar 2 Liquidity" on cash flow mismatch risk (CFMR) suggests that it accepts the need to align with Basel, while also regarding the Basel metrics as insufficient. The LCR categories are not the metrics that the banks would have chosen themselves, but it is the regulators that are leading the way, not the banks. Consequently there are objections that the UK regulator is now "gold-plating" a standard – LCR – that has already been agreed at the European level, drawing yet more resources away from internal risk management to regulatory compliance. On the other hand, many in the industry rightly pointed out when LCR was announced that no single standardized measure could take account of every aspect of liquidity risk, arguing for a Pillar 2 type of approach.

The introduction of this new regulation brings together the old regime with the ratio-based metrics of the Basel Accords, the latter being regarded as rather blunt instruments for managing liquidity risk; they leave many gaps unplugged and cracks unfilled. CP13/17 Pillar 2 Liquidity states:

The Pillar 2 framework is intended to complement the Pillar 1 regime by considering liquidity risks not captured, or not fully captured, under Pillar 1. Assessments under the Pillar 2 framework form part of the PRA's Liquidity Supervisory Review and Evaluation Process (LSREP). In designing a Pillar 2 framework

to assess and mitigate significant sources of liquidity risk, the PRA is seeking to ensure that firms have adequate liquidity, which contributes to the PRA's objective of promoting the safety and soundness of firms.

In other words, the metrics relating to the additional monitoring tools are designed to complement the supervision of an institution's liquidity risk beyond the scenario for which the liquidity coverage ratio (LCR) is defined. The proposed new regulatory regime harmonizes reporting for the whole liquidity risk framework. With CP13/17 Pillar 2 the UK regulator proposed a new reporting template, PRA110. This builds on the European Banking Authority's ALMM (additional liquidity monitoring metrics) C66 2016 recommendation, adding a couple of new sections (see Figure 1).

Furthermore, CP13/17 reverts to the individual liquidity guidance (ILG) approach of the old regulatory regime, which it now supersedes; in our view, it should therefore not be regarded as ground-breaking from a regulatory standpoint. The UK regulator's previous regime for liquidity risk compliance covered 10 sources of risks, many of which are not covered by LCR such as intra-day liquidity. These are now effectively being aligned with the language of LCR in the PRA110 template.

In PRA110 new rows and columns have been added to align with LCR; these are conveniently indicated with color coding in the template. However, similar to the UK regulator's earlier approach, CP13/17 gives banks a degree of freedom in choosing the behavioral models and assumptions that they want to use in the monetization framework.

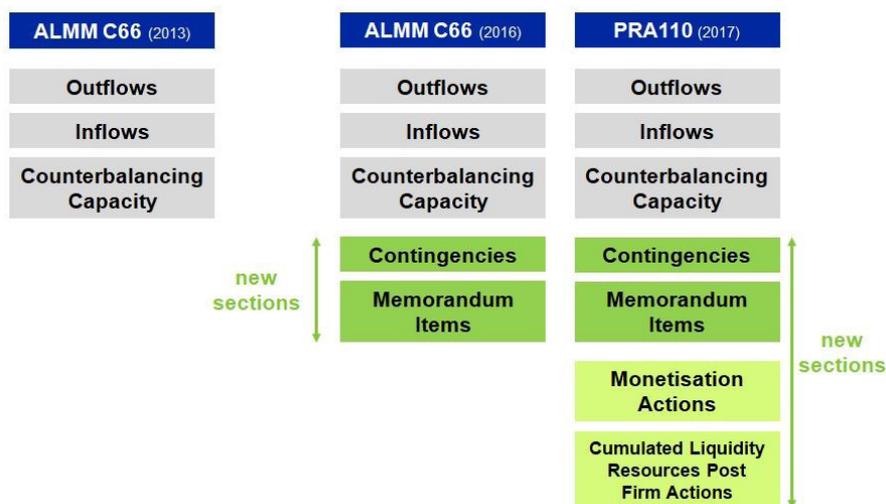


Figure 1: The evolution of PRA110 from the EBA's ALMM C66 recommendations.

WHAT IS NEW IN PRA110?

The UK regulator's CFMR framework focuses on the following sources of liquidity risk:

Low Point Risk

Under LCR, firms must hold sufficient high-quality liquid assets (HQLA) to cover their cumulative liquidity needs over 30 calendar days. If a firm experiences a peak liquidity need within the 30-day window that is greater than its requirement on day 30, the firm is exposed to the additional net outflow (the difference between the peak and end-month requirement). But it does not necessarily hold sufficient HQLA to cover these additional outflows on that day.

HQLA Monetization Risks

Firms might not be able to monetize sufficient non-cash HQLA to cover cumulative net outflows under the LCR stress daily. There are likely limitations to the speed with which cash can be raised in the repo market or through outright sales, linked to market depth, the number of a firm's regular counterparties, individual turnover, settlement times and so on.

Cliff Risk

The LCR focuses on a 30 calendar day horizon. Firms can "window-dress" their LCRs by pushing maturity mismatches just beyond the 30-day horizon (that is monitor 90-day horizons).

FX Mismatch Risks

Firms typically assume that currencies are exchangeable given the depth of liquidity in the spot FX and FX swap markets, particularly in reserve currencies. However, firms might not be able to access FX markets as usual in times of stress.

THE NEW SECTIONS IN PRA110

In addition to the requirement for greater granularity on LCR outflow, inflow and counterbalancing capacity, the PRA110 template adds the following headings:

Contingencies

For granular LCR stress, PRA110 requires the reporting of outflows from committed facilities for "other" and "liquidity facilities" at more granular level (breakdown by counterparty type) and the impact of cash outflows in each notch (maximum of eight notches) due to downgrade triggers.

Memorandum Items

PRA110 does not require the reporting of five LCR components. However, for granular LCR stress, there are additional reporting items to capture the flow of assets from collateral swap transactions, securities flow from some HQLA items, and derivatives margining and exposure.

Monetization Framework of HQLA

Monetization Actions: capture the assumptions on the limitations the bank is likely to face in monetizing non-cash HQLA (that is the speed with which they expect to be able to monetize different types of non-cash HQLA, daily, via repo markets and outright sales, in time of stress).

Cumulated Liquidity Resources Post Firm Actions: capture the expected end-of-day cash and unencumbered asset positions, on a cumulative basis.

Some practical challenges remain

From the practical implementation (as opposed to regulatory) standpoint, many banks might nevertheless struggle to implement the requirements where they have separate systems for, on the one hand LCR, and on the other hand the wider risk management required by the UK and other regulators. The requirements have shifted again. For example, under the previous UK regulatory regime the ILG metric required a survival horizon approach, whereas the LCR was only ever a 30-day point approach. Now the PRA110 requires LCR itself to be turned into a survival horizon (that is banks must demonstrate a positive position through days 1-30, not just on day 30. If up to now the two have been tackled in separate systems it can cause significant disruption to align them.

If banks are looking to tackle this disparity in their systems, then ALM/Treasury managers will need to exert influence to make sure they can align the full set of their regulatory and internal risk management requirements in whatever the end state is chosen. In other words, in our opinion they should opt to integrate regulatory and internal management systems, rather than maintain separate systems. It has been difficult to achieve this over the past because previously the rate of regulatory change has been so rapid.

Integrating ALM Functions

Banks can take this alignment of regulatory metrics as an opportunity to integrate with their internal risk management, along with other ALM functions. The Pillar 1 metrics are now settled and in place and calmer waters appear to be returning to the compliance environment. The Pillar 2 metrics give banks greater discretion in measuring key risk drivers that is they align with internal risk management best practices, even if couched in regulatory terminology. From an implementation point of view, banks can take this opportunity to move towards a strategic solution on managing risk. Interest Rate Risk in the Banking Book (IRRBB) is another new regulation that takes a non-standardized approach to interest risk, following the advice of two rounds of consultation with the industry. IRRBB should be managed in conjunction with liquidity risk, as there is a major overlap between the two; after all, both are designed to shore up balance sheet risk. From a reporting perspective, costs could be compressed if IRR and liquidity are consolidated in the same reports (based on the same data). The CP13/17 proposals are not simply for an externally regulated compliance project, as was the case with Basel I and Basel II; most of the assumptions are now under the supervision of ALM (as this is Pillar 2) and in the specific case of LCR it needs to be monitored daily, because it has a real cost for the bank.

There might be a hiatus in the constant waves of new regulations that we have seen over the past ten years, but we believe the turnaround times expected by both regulatory supervisors and top management remain as tight. If the ALM team is to return to its "real job", that is analyzing risks and taking the appropriate mitigating actions, automation will be essential, as will be software solutions that not only churn out the standard reports required by the regulator but also offer the flexibility to carry out a broad range of "what if" and scenario analyses.

Asia Also Seeking to Emulate Best Practice

As an aside: in Asia, Basel III requirements are largely regarded as having been designed to address the problems of the USA and Europe, with Asian voices under-represented on the Basel committees and other decision-making forums. The new rules aim to resolve the under-capitalization and excessive leverage of the wholesale banking model prevalent in the West, in contrast to the prevailing retail banking model in Asia, where heavy reliance on equity capitalization allows banks to meet the Basel III capital requirements with relative ease.

However, Asian countries have diverse objectives for economic development and their banking systems are at varying stages of maturity. The economic slowdown in the West has shifted the focus onto regional finance. In the future, Asia's continuing growth is likely to put the credit system under increasing, but diverse, strains.

For these reasons there is a growing perception first, that there is actually a lack of appropriate regulation in the region, and second, that the one-size-fits-all approach of Basel III does not meet local requirements. In particular, the region's developing capital markets make it difficult and costly for Asian banks to meet the liquidity standards of Basel III because of an insufficient supply of local government bonds. Thus, while Asian banks are aware of the Pillar 1 liquidity regulations, many regard their main weakness as the heavy reliance on prescriptive measures that do not allow for flexibility and discretion on the part of both banks and regulators in support of specific national economic agendas.

This absence of appropriate national and regional regulatory regimes has driven increased interest on the part of Asian banks in emulating the risk management best practices of European and American banks. This is particularly true in areas of risk management that might not previously have been tackled as extensively as in Europe, for example IRRBB.

Toward an Integrated Framework

We believe that banks now have greater clarity over the regulatory compliance environment than at any time since before the financial crisis. The Pillar 2 recommendations on liquidity help to complete the picture and the waves of new regulations are abating, in terms of both their intensity and frequency. At the same time, banks' asset quality is currently stable or improving in the USA and most European countries, despite sluggish economic growth.

Many banks – including some of the largest European banks – have been understandably reluctant to invest in strategic technology platforms for managing risks since, for nearly a decade, they have always been focused on the latest regulatory project. The current environment presents banks with an excellent opportunity to get off the compliance treadmill and move forward with a strategic vision that looks beyond the next round of reports.

Banks should therefore use the current window (it is impossible to say how long it will last) to adopt a common platform within their ALM function that can cover all the relevant aspects of regulatory compliance (in particular, IRRBB and liquidity management). Having computed all the relevant metrics for the different risk drivers, these can then be used to allocate the cost of the risk components to each transaction. ALM teams will then have a solid basis for implementing an accurate internal pricing mechanism. In its most mature state, funds transfer pricing (FTP) will price all risks to which product lines are exposed, influencing the volumes and terms upon which they trade in the market. By integrating regulatory compliance, internal risk management best practices, and risk adjusted pricing through a common platform, banks will not only establish more resilient and sustainable business models but also equip themselves with the flexible analytical and modeling capabilities that are needed to design new and more profitable product lines in the future.

Conclusion

The new proposals set up in the UK regulator's consultation paper CP13/17 are set to harmonize the LCR and NSFR Pillar 1 (stipulated) metrics of the Basel III Accords with the Pillar 2 (non-stipulated) approach to measuring risk drivers that were at the center of the old UK reporting requirements. We believe that the UK regulator's Pillar 2 recommendations represent a final piece in the liquidity regulatory requirements that have been shifting for the last 10 years. Banks finally have clarity about regulatory demands in this area.

The requirements set by external regulators continue to be challenging, but we believe that with this relative calm and clarity, now is the time to master the challenges by automating the process as much as possible and consolidating data so that it is readily available when needed for business as well as regulatory purposes. The necessary first steps on this journey consist of establishing a unified, consolidated data repository that allows liquidity risk and compliance managers to understand the scale and scope of their assets and liabilities, together with the ability to analyze as necessary to assess the detail of the results. Doubts about upcoming regulatory changes have often made banks reticent about investing in software that can manage a broad range of functions including IRRBB, liquidity risk and risk-adjusted pricing. However, the compliance environment is now clearer, and the current window of opportunity will not stay open forever. Once the regulatory dust has settled, success will depend on taking the opportunity to revamp systems efficiently with a long-term view.

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